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Takaki et al.

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(54) **PHASE DIFFERENCE DETECTOR AND
ROTATION ANGLE DETECTION DEVICE
INCLUDING THE SAME**

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CPC **G01B 7/30** (2013.01); **G01D 5/244**
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(58) **Field of Classification Search**

CPC **G01B 7/30**; **G01D 5/244**
See application file for complete search history.

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ABSTRACT

In a phase difference detector, a first phase difference computation unit computes a value of $E(i) \cdot C$ corresponding to one and the same given magnetic pole sensed by the two magnetic sensors with use of six output signals sampled at three different timings while the two magnetic sensors are sensing the given magnetic pole when a rotary body is rotating. E is an angular width error correction value, and C is a phase difference between two signals. The first phase difference computation unit executes this process until values of $E(i) \cdot C$ corresponding to all the magnetic poles are computed. After that, the first phase difference computation unit computes the phase difference between the output signals with use of the values of $E(i) \cdot C$ corresponding to all the magnetic poles and the number (m) of the magnetic poles.

9 Claims, 16 Drawing Sheets

